

Claims:

1-20. (Canceled)

21. (Currently amended) ~~The fusion protein according to claim 18, wherein said second proteinaceous portion comprises SEQ ID NO: 29 or SEQ ID NO: 35.~~
A fusion protein for producing an immune response in a vertebrate, which fusion protein comprises:

(a) a first proteinaceous portion comprising a peptide sequence analogous to all of part of the GnRH peptide as set forth in SEQ ID NO: 13, wherein the activity of said GnRH peptide is to be inhibited within the vertebrate, and which proteinaceous portion by itself is incapable of electing an effective immunoinhibitory response in said vertebrate: connected to

(b) a second proteinaceous portion comprising a polypeptide sequence analogous to all or part of the gD protein as set forth in SEQ ID NO: 29;

wherein when the vertebrate is vaccinated with an effective amount of said fusion protein, the vertebrate recognizes said first proteinaceous portion (a) and produces an immune response capable of inhibiting the activity of said GnRH peptide within the vertebrate.

22-35. (Canceled)

36. (New) A fusion protein for producing an immune response in a vertebrate, which fusion protein comprises:

(a) a first proteinaceous portion comprising a peptide sequence analogous to all of part of the GnRH peptide as set forth in SEQ ID NO: 13, wherein the activity of said GnRH peptide is to be inhibited within the vertebrate, and which proteinaceous portion by itself is incapable of electing an effective immunoinhibitory response in said vertebrate: connected to

(b) a second proteinaceous portion comprising a polypeptide sequence analogous to all or part of the gD protein as set forth in SEQ ID NO: 35;

wherein when the vertebrate is vaccinated with an effective amount of said fusion protein, the vertebrate recognizes said first proteinaceous portion (a) and produces an immune response capable of inhibiting the activity of said GnRH peptide within the vertebrate.